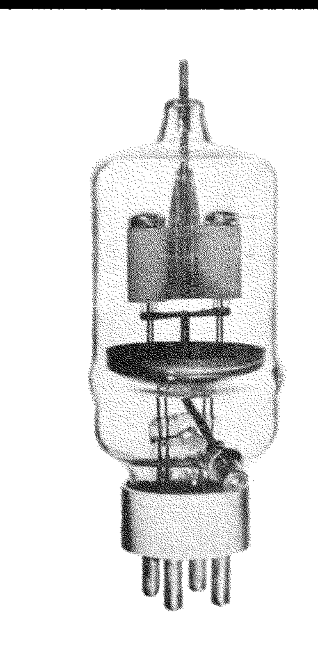
EITEL-McCULLOUGH, INC.
SAN BRUNO, CALIFORNIA

152 TH

MEDIUM-MU TRIODE
•
MODULATOR
OSCILLATOR
AMPLIFIER



GENERAL CHARACTERISTICS

Electrical

Filament: Thoriated tungsten

Voltage	5.0 or 10.0	volts
Current	12.5 or 6.25	amperes
Amplification Factor (Average)	20	
Direct Interelectrode Capacitances (Average)		
Grid-Plate	4.8	μμf
Grid-Filament	5.7	μμf
Plate-Filament	0.8	μμf
Transconductance ($i_b = 500$ ma., $E_b = 3000$ v., $E_c = -40$ v.)	8300	μmhos
Frequency for Maximum Ratings	40	mc

Mechanical

Base	Special 4 pin, No. 5000B	
Basing	RMA type 4BC	
Maximum Overall Dimensions:		
Length	7.625	inches
Diameter	2.563	inches
Net weight	7	ounces
Shipping weight (Average)	2.0	pounds

Audio Frequency Power Amplifier and Modulator

Class B

	Typical Operation—2 Tubes			Max. Rating	
D-C Plate Voltage	1500	2000	3000	3000	volts
Max.-Signal D-C Plate Current, per tube*	•	•	•	450	ma.
Plate Dissipation, per tube*	•	•	•	150	watts
D-C Grid Voltage (approx.)	–65	–90	–150		volts
Peak A-F Grid Input Voltage	340	350	430		volts
Zero-Signal D-C Plate Current	133	100	67		ma.
Max.-Signal D-C Plate Current	535	450	335		ma.
Max.-Signal Driving Power (approx.)	9	6	3		watts
Effective Load, Plate-to-Plate	5700	9600	20300		ohms
Max.-Signal Plate Power Output	500	600	700		watts

*Averaged over any sinusoidal audio frequency cycle.

Radio Frequency Power Amplifier and Oscillator

Class-C *Telegraphy
(Key down conditions without modulation)

	Typical Operation—1 Tube			Max. Rating	
D-C Plate Voltage	1500	2000	3000	3000	volts
D-C Plate Current	333	300	250	450	ma.
D-C Grid Current	58	74	70	85	ma.
D-C Grid Voltage	–125	–200	–300		volts
Plate Power Output	350	450	600		watts
Plate Input	500	600	750		watts
Plate Dissipation	150	150	150	150	watts
Peak R. F. Grid Input Voltage, (approx.)	267	334	410		volts
Driving Power, (approx.)	13	20	27		watts

*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.



GRID VOLTAGE—VOLTS

-300 -200 -100 0 100 200 300 400 500

PLATE VOLTAGE — VOLTS

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500

GRID CURRENT-AMPERES

1.1 1.0 .900 .800 .700 .600 .500 .400 .300 .250 .200 .150 .100 .075 .060 .050

.025 .050 .060 .050

PLATE CURRENT-AMPERES

0 .125 .250 .500 .750 1.00 1.25 1.50 1.75 2.00 2.50 3.00 3.50

EIMAC 152TH
CONSTANT CURRENT
CHARACTERISTICS



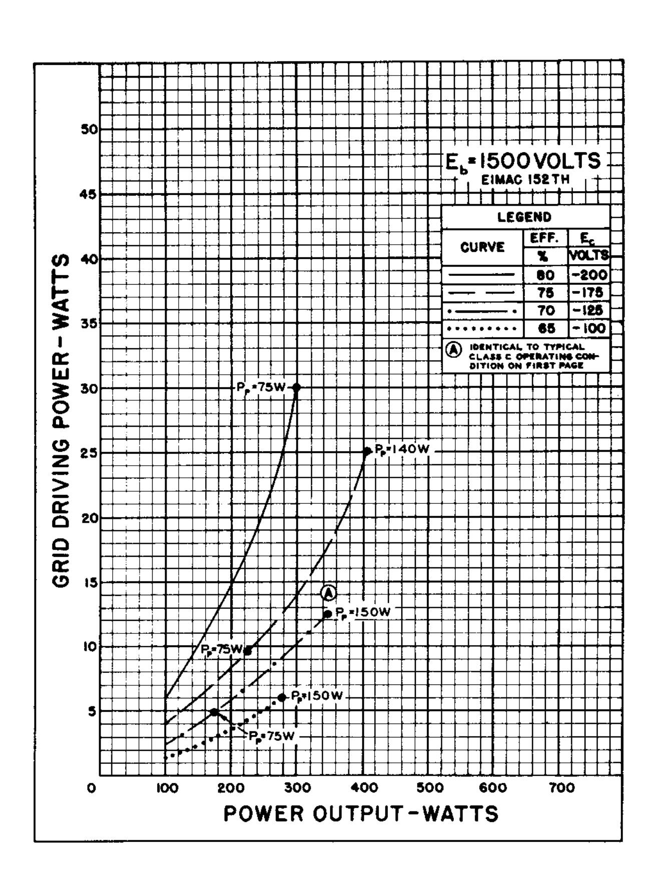
DRIVING POWER vs. POWER OUTPUT

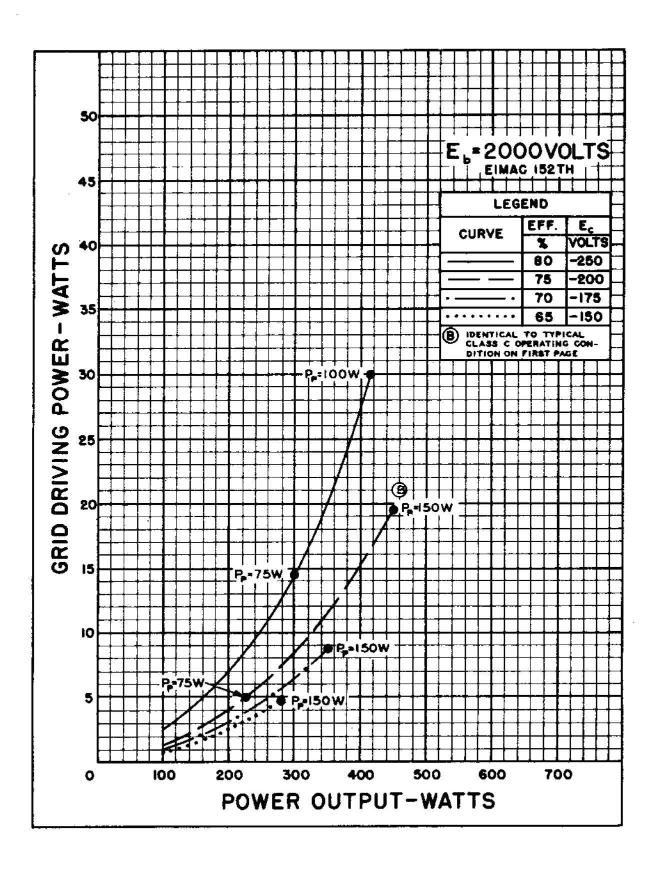
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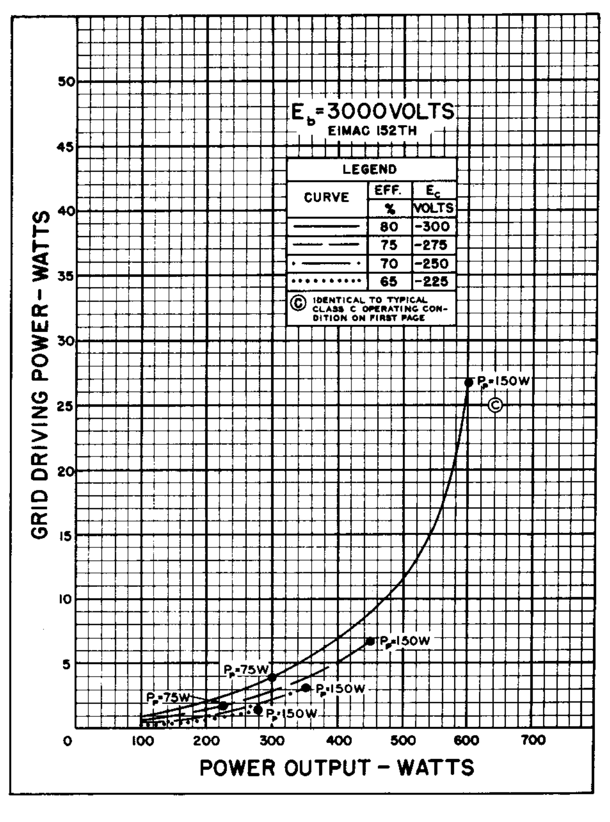
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 1500, 2000 and 3000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation in watts is indicated by P_p.

Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 1500, 2000, and 3000 volts respectively.

•









.123±.003

$\frac{7}{16}$ MIN.

PLATE

$2\frac{9}{16}$ MAX.

$6\frac{11}{16} \pm \frac{3}{16}$

$5\frac{1}{2} \pm \frac{3}{16}$

3 MAX.

$7\frac{7}{16} \pm \frac{3}{16}$

GRID (4001C)

60°

$1\frac{3}{4} \pm \frac{1}{16}$

BASE NO. 5000B

FILAMENT

FILAMENT

3 4

2 1

FILAMENT

FILAMENT

4BC

2 3 1 4

PLATE CAP

(SEE TUBE OUTLINE DRAWING)

GRID CAP
NO. 4001C

$.360 {}^{+.005}_{-.010}$

$\frac{13}{32}$

$\frac{21}{64}$ MIN.

$\frac{1}{2}$

BASE NO. 5000B

$\frac{7}{8}$

$1\frac{19}{32}$

$^{*}\frac{43}{64}$ MAX.

$\frac{41}{64}$ MIN.

$\frac{1}{16}$

$1\frac{25}{32}$ MAX.

.249±.002 DIA.
4 PINS

3 4

2 1

$\frac{11}{16}$

$\frac{11}{32}$

$\frac{13}{32}$

$\frac{13}{16}$

*ON FINISHED TUBE ADD .060 FOR SOLDER

I-F4-21959